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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,667	02/28/2002	Eisuke Sasaoka	50212-350	3977

7590 08/19/2003  
MCDERMOTT, WILL & EMERY  
600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER

SUCHECKI, KRYSTYNA

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/084,667

Applicant(s)

SASAOKA ET AL.

Examiner

Krystyna Suchecki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/613,755.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6-8 of U.S. Patent No. 6,345,140. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the application overlaps the scope of claim 7 of the patent. Claim 7 includes an additional effective area feature that would have been obvious to a skilled artisan to remove in order to broaden the scope of the claim to have a fiber wherein the modes traveling in the effective area are not a critical feature. Claims 8 of both the application and patent contain the same limitation of forming an optical cable.

3. Claims 2-7 and 9-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 6-8 of U.S. Patent No. 6,345,140 in view of Sugizaki (US 5,887,104).

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4. Regarding Claims 2-7, patent 6,345,140 ('140) teaches all of the limitations except an additional coating layer and its properties.

5. Sugizaki teaches a coating layer having a diameter of 260  $\mu\text{m}$  or less; wherein the coating layer comprises a first layer (24) provided on the outer periphery of a cladding region (22), and a second layer (25) provided on the outer periphery of the first layer; the second layer having a Young's modulus of 1000 times greater than that of the first layer (Columns 3 and 6); the first layer having a Young's modulus of 0.01 to 0.2  $\text{kgf/mm}^2$  at a temperature of 20 degrees Centigrade, and the second layer having a Young's modulus of 10 to 200  $\text{kgf/mm}^2$  at a temperature of 20 degrees Centigrade (Columns 3 and 6); and, since it is generally understood in the art that layered optical fibers with no interposing media are called "single layer", Sugizaki teaches a single layer coating (23), wherein the single layer has a Young's modulus of 1-200  $\text{kgf/mm}^2$  at a temperature of 20 degrees Centigrade (Columns 3 and 6) for the benefit of enabling a shell effect coating wherein an external force cannot be transmitted to the glass layer of a fiber (Column 3, lines 3-12 and Column 6, lines 10-20). The shell effect coating layers allow many designs of dispersion compensating optical fibers to be wound on reels into compact small-diameter coils (Column 10).

6. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the coating structure and properties taught by Sugizaki for the coating of '140 for the benefit of having a shell effect coating wherein an external force cannot be transmitted to the glass layer of a fiber (Column 3, lines 3-12 and Column 6, lines 10-20) and to enable optical fibers to be wound on reels into compact small-diameter coils (Column 10).

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7. Regarding Claims 9-16, both the patent '140 and the application claim an optical fiber comprising a core region extending along a predetermined axis and a cladding region provided on the outer periphery of said core region, said core and cladding regions being constituted by at least three layers of glass regions having respective refractive indices different from each other; said optical fiber substantially insured its single mode with respect to light at a wavelength in use; and said optical fiber having a fiber diameter of 140  $\mu\text{m}$  or more but 200  $\mu\text{m}$  or less. Both the application and patent also teach the above optical fiber in an optical cable.
8. '140 fails to teach the additional limitation that the optical fiber has an additional coating layer(s) with a thickness of 55  $\mu\text{m}$  or less and other coating features regarding the coating thickness and Young's modulus.
9. Sugizaki teaches an optical fiber having a coating layer with a thickness of 55  $\mu\text{m}$  or less (Column 3); wherein the thickness of the coating layer as 25  $\mu\text{m}$  or more (Column 2-3); wherein the coating layer comprises a first layer (24) provided on the outer periphery of a cladding region (22), and a second layer (25) provided on the outer periphery of the first layer; the second layer having a Young's modulus of 1000 times greater than that of the first layer (Columns 3 and 6); the first layer having a Young's modulus of 0.01 to 0.2  $\text{kgf/mm}^2$  at a temperature of 20 degrees Centigrade, and the second layer having a Young's modulus of 10 to 200  $\text{kgf/mm}^2$  at a temperature of 20 degrees Centigrade (Columns 3 and 6); and, since it is generally understood in the art that layered optical fibers with no interposing media are called "single layer", Sugizaki teaches a single layer coating (23), wherein the single layer has a Young's modulus of 1-200  $\text{kgf/mm}^2$  at a temperature of 20 degrees Centigrade (Columns 3 and 6) for the benefit of enabling a shell effect coating wherein an external force cannot be transmitted to the glass layer

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of a fiber (Column 3, lines 3-12 and Column 6, lines 10-20). The shell effect coating layers allow many designs of dispersion compensating optical fibers to be wound on reels into compact small-diameter coils (Column 10).

10. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the coating structure and properties taught by Sugizaki for the coating of '140 for the benefit of having a shell effect coating wherein an external force cannot be transmitted to the glass layer of a fiber (Column 3, lines 3-12 and Column 6, lines 10-20) and to enable optical fibers to be wound on reels into compact small-diameter coils (Column 10).

### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent to Yamamoto (US 3,980,390) is of interest for teaching fiber diameters of 180-200 um that are further coated. Yamamoto fails to teach or suggest the use of a three layer fiber as claimed, or the coating thickness claimed. Patent to Reed (US 4,852,968) is of interest for teaching a three layer single-mode optical fiber with a fiber diameter of 60-200 um (Column 8), but Reed fails to teach or motivate the use of the coating thickness or chromatic dispersion value claimed. GR-20-CORE is of interest for teaching the definition of a single jacket (single layer) optical fiber to be made up of two or more coextruded layers that may or may not be in intimate contact without a media between each layer (6-15) and also for teaching geometrical requirements for cladding diameters to be approximately 125 um (4-5).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krystyna Suchecki whose telephone number is (703) 305-5424. The examiner can normally be reached on M-F 8-6, with alternating Fridays off.


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13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (703) 308-4858. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

ks

August 8, 2003

  
EDWARD J. GLICK  
*Supervisor* EXAMINER  
TECHNOLOGY CENTER 2800